



**Northeast  
Nuclear Energy**

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The Northeast Utilities System

NOV 17 1999

Docket No. 50-336  
B17917

Re: 10 CFR 50.73(a)(2)(ii)

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

Millstone Nuclear Power Station, Unit No. 2  
Licensee Event Report 99-013-00  
Auxiliary Feedwater Pump Room  
High Energy Line Break Door Left Unsecured

This letter forwards Licensee Event Report (LER) 99-013-00, documenting an event that occurred at Millstone Nuclear Power Station, Unit No. 2, on October 18, 1999. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(ii).

The Northeast Nuclear Energy Company (NNECO) commitments made within this letter are included in Attachment 1.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
C. J. Schwarz  
Station Director

Attachments: 1. List of Regulatory Commitments  
2. LER 99-013-00

cc: H. J. Miller, Region I Administrator  
R. B. Eaton, NRC Senior Project Manager, Millstone Unit No. 2  
D. P. Beaulieu, Senior Resident Inspector, Millstone Unit No. 2

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Attachment 1

Millstone Nuclear Power Station, Unit No. 2

Regulatory Commitments

November 1999

Attachment 1

Regulatory Commitment Enclosure  
List of Regulatory Commitments

The following table identifies those actions committed to by NNECO in this document.

<b>REGULATORY COMMITMENT</b>	<b>COMMITTED DATE OR OUTAGE</b>
B17917.01: The process used to control compensatory fire watches shall be reviewed and enhanced as necessary to ensure compensatory fire watches are terminated when no longer required.	Prior to April 1, 2000

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Attachment 2

Millstone Nuclear Power Station, Unit No. 2

LER 99-013-00

November 1999

# LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1) <p style="text-align: center;">Millstone Nuclear Power Station Unit 2</p>	DOCKET NUMBER (2) <p style="text-align: center;">05000336</p>	PAGE (3) <p style="text-align: center;">1 OF 3</p>
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TITLE (4)  

Auxiliary Feedwater Pump Room High Energy Line Break Door Left Unsecured

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	18	99	99	-- 013 --	00	11	17	99	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		100	20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)	
			20.2203(a)(1)		20.2203(a)(3)(i)		X 50.73(a)(2)(ii)		50.73(a)(2)(x)	
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71	
			20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER	
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below #1 NRC Form 366A	
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)			

**LICENSEE CONTACT FOR THIS LER (12)**

NAME <p style="text-align: center;">R. Joshi, MP2 Acting Regulatory Compliance Supervisor</p>	TELEPHONE NUMBER (Include Area Code) <p style="text-align: center;">(860) 440-2080</p>
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**COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

<b>SUPPLEMENTAL REPORT EXPECTED (14)</b>				<b>EXPECTED SUBMISSION DATE (15)</b>		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	NO						

**ABSTRACT** (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On October 18, 1999 at approximately 1532 hours it was discovered that the High Energy Line Break (HELB) door between the two Auxiliary Feedwater (AFW) Pump Rooms was closed, but it's locking mechanism was not secured. This event resulted in the HELB door being inoperable for less than 10 minutes.

The cause of this event was a skill based human performance error, a lack of adequate verification that the HELB door was properly secured.

For this event, a briefing was performed for appropriate fire watch and security personnel to emphasize the importance of securing HELB doors and the process used to control compensatory fire watches shall be reviewed and enhanced as necessary to ensure fire watches are terminated when no longer required.

**LICENSEE EVENT REPORT (LER)**  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
Millstone Nuclear Power Station Unit 2	05000336	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		99	- 013 -	00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

**I. Description of Event**

On October 18, 1999 at approximately 1532 hours it was discovered that the High Energy Line Break (HELB) door [DR] between the two Auxiliary Feedwater (AFW) [BA] Pump [P] Rooms was closed, but its locking mechanism was not secured. This event resulted in the HELB door being inoperable for less than 10 minutes. At the time of this event, the plant was in Mode 1 at 100% power.

On October 22, 1999, after review and investigation of this event it was determined that the failure to secure this HELB door placed the plant outside its design basis and a prompt report was made per 10 CFR 50.72(b)(1)(ii). This door does not fail in its safe condition (closed). The door is hinged so that if a HELB occurred the door would not fail closed, but would be blown open, exposing all three AFW pumps to the high energy event.

The facility design basis requires that doors relied upon for HELB barriers be maintained closed and secured in operating Modes 1, 2, and 3 except during normal personnel ingress and egress. A contributing factor to the HELB door being unsecured was an unusually high amount of door ingress and egress due to an hourly fire watch. The fire watch was initiated on June 28, 1999 when a tamper switch failed in the Terry Turbine [TRB] pump room. The switch was repaired the next day, on June 29, 1999. However, the hourly fire watch was not discontinued at that time. Approximately 2904 entries were made through HELB door 203-01-001 during this time period, challenging the HELB door's operability.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(ii)(B), as a condition outside the design basis of the plant.

**II. Cause of Event**

The cause of this event was a skill based human performance error, a lack of adequate verification that the HELB door was properly secured.

**III. Analysis of Event**

The purpose of the HELB Program is to identify and mitigate potential breaks in high energy lines which would have a significant impact on safety-related equipment. This program includes criteria for the types and locations of breaks which must be postulated. Various HELB barriers throughout the plant require that their integrity be maintained against the unlikely event of a HELB. The maintenance of this integrity is important and required to protect mechanical and electrical equipment and systems within an area from the potential damage induced by the direct consequences of a HELB. Damage can be the result of jet impingement, pipe whip or the post-HELB environment due to temperature, pressure, flooding or humidity caused by the steam.

The potential consequences of the identified HELB door failing to be maintained closed and secure as described in this LER is significant in that if a HELB had occurred in the steam line to the facility's turbine driven AFW pump, the remaining motor driven AFW pumps would have also been rendered inoperable.

It should be noted that the probability of a HELB occurring during the timeframe in which the door was unsecured is low. However, since the door was uncontrolled during this timeframe and the condition was discovered during an unrelated entry, the door could have been left unsecured for approximately an hour. Therefore, this event was potentially safety significant.

**LICENSEE EVENT REPORT (LER)**  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
Millstone Nuclear Power Station Unit 2	05000336	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		99	- 013 -	00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

IV. Corrective Action

As a result of this event, the following actions have been, or will be, performed:

1. A briefing was performed for appropriate fire watch and security personnel to emphasize the importance of securing HELB doors.
2. The process used to control compensatory fire watches shall be reviewed and enhanced as necessary to ensure compensatory fire watches are terminated when no longer required. These activities shall be completed prior to April 1, 2000.

V. Additional Information

Similar Events

Previous similar events involving HELBs and AFW valves include:

LER 98-019: On September 16, 1998, it was identified that following a high energy line break in the turbine building (TB), a higher-than-previously analyzed ambient temperature may also have challenged the ability of the AFW regulating valve backup air equipment to remotely close and isolate flow. Subsequently, the licensee identified that other components of the AFW regulating valve also may be challenged. Current estimates predict a maximum TB temperature of 326 degrees Fahrenheit compared to the earlier prediction of 220 degrees Fahrenheit. The cause of this condition was an inadequate review by the original facility analysis for postulated HELBs. As a pending corrective action, the auxiliary feedwater system will be upgraded, as required, to ensure compatibility with analyzed HELB conditions.

Energy Industry Identification System (EIIIS) codes are identified in the text as [XX].